

## REMARKS

After entry of this Amendment, the pending claims are: claims 1-26. The Office Action dated February 6, 2007 has been carefully considered. Claims 1-3, 8-10, 14, 15, 18 and 23 have been amended without prejudice. Claims 24-26 have been added. No new matter has been added. Reconsideration and allowance of the present application in view of the above Amendments and the following Remarks is respectfully requested.

In the Office Action dated February 6, 2007, the Examiner:

- objected to claims 1-23. Specifically, “is” should be inserted between “support” and “plastically” in independent claim 1.
- Rejected claims 10 and 15 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, claims 10 and 15 were rejected for lacking sufficient antecedent basis.
- rejected claims 1, 3-20, 22, and 23 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,099,528 to Saurat (“Saurat”);
- rejected claim 2 under 35 U.S.C. 103(a) as being unpatentable over Saurat; and
- rejected claim 21 under 35 U.S.C. 103(a) as being unpatentable over Saurat in view of U.S. Patent No. 3,938,198 to Kahn *et al.* (“Kahn”).

## INDEPENDENT CLAIM 1

Independent claim 1 has been objected to. Specifically, “is” should be inserted between “support” and “plastically.” Independent claim 1 has been amended to recite “the longitudinal support is

plastically deformable.” Withdrawal of this objection and allowance of independent claim 1 is respectfully requested.

#### **DEPENDENT CLAIMS 10 AND 15**

Dependent claims 10 and 15 have been rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Specifically, dependent claim 10 was rejected for lacking sufficient antecedent basis for “the plastic encasing.” Dependent claim 10 has been amended to recite “the core and the plastic member are dimensioned ...” Dependent claim 8, from which dependent claim 10 depends, has been amended to recite “a plastically deformable core made of metal encased in a human-tissue-compatible plastic member.” Withdrawal of this objection and allowance of dependent claim 10 is respectfully requested.

Dependent claim 15 was rejected for lacking sufficient antecedent basis for “the bone anchoring means.” Dependent claim 15 has been amended to recite “further comprising bone anchoring means, the bone anchoring means comprising ...” Withdrawal of this objection and allowance of dependent claim 15 is respectfully requested.

#### **INDEPENDENT CLAIM 1**

Independent claim 1 was rejected as being anticipated by Saurat. Independent claim 1 requires, *inter alia*, an apparatus for the dynamic stabilization of bones or bone fragments comprising a longitudinal support, the longitudinal support is plastically deformable between a first stable shape state

and a second stable shape state by application of a prespecified bending force, the longitudinal support remaining flexible within predetermined limits while in the first and seconds stable shape states. It is respectfully submitted that Saurat does not disclose, teach or suggest a longitudinal support that *remains flexible within predetermined limits* while in the first and seconds stable shape states.

Saurat discloses a vertebral rod 1, the rod 1 incorporating means for providing a variable stiffness along the length of the rod. (*See* column 1, lines 39-41). In one embodiment, the means for providing a variable stiffness comprises forming an axial bore in the rod. (*See* column 1, lines 42-44). More preferably, the rod 1 has an axial bore 2 consisting of a first portion 3 having a diameter d1 and a second portion 4 having a diameter d2 less than d1 so that the rod 1 has three longitudinal parts of different stiffness: a first part of maximum stiffness R1 corresponding to the solid section of the rod 1, a second part of stiffness R2 less than R1 corresponding to the portion 4 of bore 2, and a third part of stiffness R3 less than R2 corresponding to the portion 3 of bore 1. (*See* column 2, lines 42-55).

Saurat also discloses a rod 25 having an axial bore extending along a part of its length, the axial bore being filled with a core 26 wherein the core 26 has a stiffness different than the rod 1. (*See* column 3, line 63 to column 3, line 3). The core 26 extending only along a part of the length of the rod, which permits varying the stiffness along the longitudinal axis. (*See* column 4, lines 3-5).

It is respectfully submitted that Saurat does not disclose, teach or suggest a longitudinal support that remains flexible within predetermined limits while in the first and seconds stable shape states.

Nonetheless, in an effort to expedite prosecution of the present application, independent claim 1 has been amended to recite, *inter alia*, a longitudinal support having a first end, a second end and a

uniform stiffness extending from the first end to the second end. It is respectfully submitted that there is absolutely no disclosure, teaching or suggestion in Saurat of providing a longitudinal support that is moveable from a first stable shape state to a second stable shape state by application of a prespecified bending force, wherein the longitudinal support has a uniform stiffness along its length. Rather, Saurat discloses, and in fact the entire point of the disclosed invention is to provide a rod having a variable stiffness along the longitudinal axis of the rod.

For at least the above-identified reasons, it is respectfully submitted that Saurat does not disclose, teach or suggest all of the limitations of independent claim 1. Thus, it is respectfully submitted that independent claim 1 is allowable over the cited prior art. Withdrawal of this rejection and allowance of independent claim 1 is respectfully requested.

Furthermore, as claims 2-20, 22, 23, and newly added dependent claim 24 all ultimately depend from independent claim 1, it is submitted that these claims are equally allowable. Withdrawal of these rejections and allowance of claims 2-20 and 22-24 is also respectfully requested.

With respect to claim 21, which was rejected as being unpatentable over Saurat in view of Kahn, Kahn was cited for the purpose of showing a titanium metal core surrounded by a different material casing. Thus, it is respectfully submitted that Kahn does not rectify the shortcomings of Saurat. Thus, it is submitted that claim 21 is equally allowable. Withdrawal of this rejection and allowance of claims 21 is also respectfully requested.

#### **NEWLY ADDED INDEPENDENT CLAIM 25**

Newly added independent claim 25 recites an apparatus for the stabilization of bones, the apparatus comprising: a longitudinal support member having a uniform stiffness from a first end thereof to a second end thereof, the longitudinal support member being sized and configured to engage at least two vertebrae, the longitudinal support member including a deformable core made of metal and a bio-compatible plastic member sized and configured to encase said core, the longitudinal support member being deformable between a first stable state and a second stable state by application of a bending force, the longitudinal support member remaining flexible in the first and second stable states; wherein the longitudinal support is flexible in a first direction but not in a second direction.

Thus, for at least the reasons stated above in connection with independent claim 1, it is respectfully submitted that the cited prior art does not disclose, teach or suggest all of the limitations of independent claim 25. Thus, it is respectfully submitted that independent claim 25 is allowable over the cited prior art. Allowance of independent claim 25 is respectfully requested.

Moreover, independent claim 25 requires the longitudinal support member to remain flexible in a first direction but not in a second direction while in the first and second stable states. It is respectfully submitted that there is absolutely no disclosure, suggestion or teaching in Saurat of a longitudinal support member that is capable of being moved between a first stable state and a second stable state, wherein the longitudinal support remains flexible while in both the first and second stable states, and further remaining flexible in only one direction.

Therefore, it is respectfully submitted that independent claim 25 is allowable over the cited prior art. Allowance of independent claim 25 is respectfully requested. Furthermore, as newly added dependent claim 26 depends from independent claim 25, it is submitted that claim 26 is equally allowable. Allowance of claim 26 is also respectfully requested.

### CONCLUSION

A fee of \$150.00 for the addition of new claims is believed due for this submission. The Commissioner is authorized to charge this fee and any other fee which may now or hereafter be due in this application to Deposit Account No. 19-4709.

In the event that there are any questions, or should additional information be required, please contact Applicants' attorney at the number listed below.

Date: May 2, 2007

Respectfully submitted,

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